

IN THE CLAIMS:

Please amend claims 1-11 and 13, 15-21. Claims 14, 22-28 have been cancelled. New claims 29-37 have been added. Unchanged claims are included for the convenience of the Examiner.

1. (Currently Amended) A method, comprising:

when a first server is active in a peer-to-peer network[,], having multiple peers,
from a first peer querying the first server for information about a [desired]
second peer in the peer-to-peer network, wherein the first server is
configured to include information about all of the multiple peers in the
peer-to-peer network; and

when the first server is not [active in the network] able to satisfy the query,
querying one or more neighbor peers for information about the [desired]
second peer.

2. (Currently Amended) The method of claim 1, wherein the first server includes
a [server] network peer directory containing the information about all of the
multiple peers in the peer-to-peer network.

3. (Currently Amended) The method of claim [1] 2, wherein the [each] one or
more of the multiple peers in the peer-to-peer network includes a neighbor peer
directory containing information about [the] its corresponding neighbor peers.

4. (Currently Amended) The method of claim 3, further comprising:
determining if the information about the [desired] second peer is located [in the

neighbor peer directory] in the first peer prior to querying the first server; and
retrieving the information about the [desired] second peer [from a local storage] when the [desired] information about the second peer is located in the [neighbor peer directory] first peer.

5. (Currently Amended) The method of claim 4, wherein querying the one or more neighbor peers comprises:
querying [each of the] a neighbor peer[s] included in the neighbor peer directory of the first peer to locate the information about the [desired] second peer; and
when the information about the [desired] second peer is located in the neighbor peer, retrieving the information about the [desired] second peer from the neighbor peer.

6. (Currently Amended) The method of claim 1, wherein when the first server is not active in the peer-to-peer network, at least one of the multiple peers in the peer-to-peer network becomes a [replacement] second server.

7. (Currently Amended) The method of claim 6, wherein the at least one of the multiple peers in the peer-to-peer network becomes [a replacement] the second server by broadcasting a message to [the] other peers in the peer-to-peer network.

8. (Currently Amended) The method of claim 7, wherein the at least one of the multiple peers in the peer-to-peer network becomes [a replacement] the second server by receiving positive acknowledgement to the broadcasted message from the other [the] peers in the peer-to-peer network.

9. (Currently Amended) The method of claim 6, wherein the at least one of the multiple peers in the peer-to-peer network becomes [a replacement] the second server if [the] that peer has sufficient capability rating.

10. (Currently Amended) The method of claim 9, wherein the capability rating of a peer includes [previously set] its storage and processing capability [indication that the peer is capable of performing as the replacement server].

11. (Currently Amended) A peer system, comprising:
a network interface to connect to a peer-to-peer network;
a processor coupled with the network interface;
a memory coupled with the processor and the network interface, the memory
including a neighbor peer directory having information about zero or more
neighbor peers in the peer-to-peer network, wherein when searching for a
desired peer, the [neighbor peer directory] memory is first searched to
locate information about the desired peer, [and] wherein when the
information about the desired peer is not [located] included in the
[neighbor peer directory] memory, a query is sent to a server connected to
the peer-to-peer network to search for the information about the desired

peer, and wherein when the server is not able to satisfy the request, the query is sent to neighbor peers.

12. (Original) The system of claim 11, wherein the query is sent to the server when the server is active.

13. (Currently Amended) The system of claim 12, wherein the server includes a [server-peer] network peer directory having information about all peers in the peer-to-peer network.

14. (Cancelled)

15. (Currently Amended) The system of claim 12, wherein when the server is not active, one or more peers in the peer-to-peer network becomes a replacement server.

16. (Currently Amended) A computer readable medium containing executable instructions which, when executed in a processing system, causes the processing system to perform a method comprising:
when a server is active in a peer-to-peer network, querying the server for
information about a desired peer in the peer-to-peer network; and
when the server is not [active in the network] able to provide the information
about the desired peer, querying neighbor peers for the information about
the desired peer.

17. (Currently Amended) The computer readable medium of claim 16, wherein the server includes [a server peer directory containing] information about all of the peers in the peer-to-peer network.

18. (Currently Amended) The computer readable medium of claim 16, wherein one or more [the each] of the peers in the peer-to-peer network includes [a neighbor peer directory containing] information about [the] its neighbor peers.

19. (Currently Amended) The computer readable medium of claim 18, further comprising:

[determining if the desired peer is located in the neighbor peer directory prior to querying the server; and]
retrieving the information about the desired peer from a local [storage] memory instead of querying the server when the information about the desired peer is located in the [neighbor peer directory] local memory.

20. (Currently Amended) The computer readable medium of claim 19, wherein querying the neighbor peers comprises:
querying [each] one or more of the neighbor peers [included in the neighbor peer directory] to locate the information about the desired peer; and
when the information about the desired peer is located in [the] a neighbor peer, retrieving the information about the desired peer from the neighbor peer.

21. (Currently Amended) The computer readable medium of claim 16, wherein when the server [is not active] becomes inactive in the peer-to-peer network, at least one of the peers in the peer-to-peer network becomes a replacement server.

22-28. (Cancelled)

29. (New) A peer-to-peer network, comprising:
a super peer configured to include information about peers in the peer-to-peer network, wherein each of the peers includes information about the super peer, wherein one or more of the peers include information about its corresponding neighbor peers, wherein when a first peer is to search for a second peer in the peer-to-peer network, the first peer is to search in a sequence including its memory, the super peer, and its neighbor peers until either information about the second peer is located or it is determined that the second peer is not in the peer-to-peer network.

30. (New) The network of claim 29, wherein the super peer is capable of delegating its super peer functions to one or more peers in the peer-to-peer network.

31. (New) The network of claim 30, wherein when the super peer becomes inactive, each of the peers in the peer-to-peer network is to update its information about status of the super peer.

32. (New) The network of claim 31, wherein when the super peer becomes inactive, one or more of the peers in the peer-to-peer network becomes a replacement super peer.
33. (New) The network of claim 32, wherein the replacement super peer is have sufficient storing and processing capability to perform as the super peer.
34. (New) The network of claim 31, wherein each peer is to update the super peer of changes to information about its neighbor peer.
35. (New) The network of claim 34, wherein each peer is to update the super peer of changes to information about its network identification.
36. (New) The network of claim 31, wherein when the first peer is to search for the second peer using the neighbor peers of the first peer, hop count information is used to control search propagation.
37. (New) The network of claim 31, wherein when the first peer is to search for the second peer using the neighbor peers of the first peer, time stamp information is used to control search propagation.